



## Improvement of a device for testing dental restorative materials

IDEA

LABORATORY

PROTOTYPE

SCALE-UP

MARKET

> **Description** This invention consists of an improvement of a microtensile testing device for dental restorative materials, which allows for a more detailed evaluation of the materials to be used in different dental restoration procedures.

> **Problem** The bond strength of adhesive agents in dentin and enamel can be tested by means of mechanical shear and tensile tests. However, these procedures do not determine the true bond strength of materials. This difficulty is partly overcome by using microtensile testing, which allows for a more effective evaluation of the bond interface. Moreover, the devices currently available in the dental industry to conduct such assessments do not present homogeneous stress distribution, and therefore generate results that are not entirely reliable.

> **Benefits** The proposed invention consists of an improvement in a device for microtensile testing of dental restorative materials. This instrument ensures a more uniform distribution of stresses at the bond interface, thus providing more reliable results.